**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

**Claim 1 (currently amended):** An optical switch comprising:

an array of optical input channels each capable of carrying an associated input light beam;

an array of output channels;

~~an array of beam monitoring elements;~~

a switching array for coupling selected input channels to selected output channels enabling the switching of each input light beam to one of a plurality of output channels;

a first beam splitter optically interposed between the switching array and the array of output channels to split input light beams into a monitor beam and a working beam; and

an array of beam monitoring elements wherein each beam monitoring element is arrange to receive a monitor beam and wherein each beam monitoring element comprises:

a first detector element;

a second detector element; and

a second beam splitter arranged to receive the monitor beam and reflect a portion of the monitor beam into the second detector element while directing another portion of the monitor beam onto the first detector element;

wherein the first and second detectors of each beam monitoring element measure optical power of the respective portions of a monitor beam such that both the angular misalignment and the positional misalignment of a working beam can be detected and adjusted ~~measures one of the monitor beams to provide optical information used for adjusting the switching array~~ such that the working beams enter the output channels having desired optical characteristics.

**Claim 2 (original):** An optical switch as in Claim 1 wherein the beam splitter comprises a partially reflective surface optically positioned such that the monitor beam is reflected by the

partially reflective surface onto the array of beam monitoring elements, and such that the working beam passes through the partially reflective surface onto the array of output channels.

**Claim 3 (original):** An optical switch as in Claim 1 wherein the optical information provided by the beam monitoring element enables the adjustment of the working beam to adjust for positional misalignment errors and angular misalignment errors so that the working beams enter the output channels having desired optical characteristics.

**Claim 4 (original):** An optical switch as in Claim 3 wherein a single beam monitoring element measures optical power in a monitor beam such that both the angular misalignment and the positional misalignment of a working beam can be detected and adjusted.

**Claim 5 (currently amended):** An optical switch as in Claim 1 [[3]] wherein the first and second detector elements of each beam monitoring element comprise a position sensitive detector. ~~includes means for measuring the monitor beam thereby determining the positional misalignment and angular misalignment in the working beam.~~

**Claim 6 (original):** An optical switch as in Claim 1 wherein the beam monitoring elements provide optical information used to adjust the working beams such that the beams enter the output channels having a desired optical power.

**Claim 7 (original):** An optical switch as in Claim 6 wherein the desired optical power is an optimal amount of optical power.

**Claim 8 (currently amended):** An optical switch as in Claim 1, wherein the first beam splitter is included as part of a rhomboid prism assembly which is positioned such that the monitor beams and the working beams exit the rhomboid prism assembly substantially parallel to each other.

**Claim 9 (original):** An optical switch as in Claim 1, wherein the switching array comprises, in combination, control circuitry, a first movable reflector array, and a second movable reflector array, each array including a plurality of movable reflectors, the position of which is controlled by control circuitry, wherein the reflectors are positioned such that the input light beams pass onto the first movable reflector array, and such that the plurality of input light beams are reflected from the movable reflectors of the first reflector array onto the reflectors of the second reflector array enabling the switching of the input light beams to selected output channels.

**Claim 10 (original):** An optical switch as in Claim 9 further including:

a first lens array including a plurality of first lenses, positioned such that the plurality of input light beams pass through the plurality of first lenses onto the switching array; and

a second lens array including a plurality of second lenses, positioned such that the working beams pass through the plurality of second lenses into the output channels.

**Claim 11 (original):** An optical switch as in Claim 10 wherein the working beams enter the output channels having optimized beam power.

**Claim 12 (original):** An optical switch as in Claim 11 wherein the control circuitry, using information provided by the beam monitoring elements, adjusts the angular misalignment and the positional misalignment of the working beams.

**Claim 13 (cancelled).**

**Claim 14 (original):** An optical switch as in Claim 10 wherein the monitor lenses of the beam monitoring elements are included as part of the second lens array.

**Claim 15 (original):** An optical switch as in Claim 9 wherein the plurality of output channels comprise a plurality of output fibers.

**Claim 16 & 17 (cancelled).**

**Claim 18 (currently amended):** An optical switch as in Claim 1 [[10]] wherein each beam monitoring element includes: ~~comprises:~~

the first detector element comprising a first quadrature detector element; and

the second detector element comprising a second quadrature detector element. ~~; and~~

~~a second beam splitter for reflecting a portion of the light of the into the second quadrature detector element and for passing another portion of the light of the monitor beam through the second beam splitter into the first quadrature detector element.~~

**Claim 19 (currently amended):** An optical switch as in Claim 1 [[18]] wherein the portion of the light measured by the first ~~quadrature~~ detector element provides information used to determine and adjust the position of the working beam; and

wherein the another portion of the light measured by the second ~~quadrature~~ detector element is used, in conjunction with the portion of the light measured by the first ~~quadrature~~ detector element, to provide information used to determine and adjust the angle at which the working beam enters the output channels.

**Claims 20-56 (cancelled).**

**Claim 57 (new):** A beam monitoring element comprising:

a first light block having formed therein, a first aperture;

a monitor lens; and

a detector element for detecting a monitor beam after it passes through the first aperture and passes through the monitor lens wherein the monitor beam provides positional misalignment information concerning a working beam associated with the monitor beam.

**Claim 58 (new):** An optical switch incorporating the beam monitoring element of Claim 57, wherein the switch comprises:

an array of optical input channels each capable of carrying an associated input light beam;

an array of output channels;

an array of said beam monitoring elements;

a switching array for coupling selected input channels to selected output channels enabling the switching of each input light beam to one of a plurality of output channels;

a beam splitter optically interposed between the switching array and the array of output channels to split input light beams into a monitor beam and a working beam; and

wherein each beam monitoring element measures one of the monitor beams to provide optical information used for adjusting the switching array such that the working beams enter the output channels having desired optical characteristics.

**Claim 59 (new):** An optical switch as in Claim 58 wherein the detector element includes a small surface area sized such that the monitor beam passing through the first aperture and passing through the monitor lens and impinging on the small detector element provides information regarding the angular misalignment of the working beam.

**Claim 60 (new):** An optical switch as in Claim 58 the detector element comprises:

a second light block positioned to block a monitor beam from impinging on the detector element;

a second aperture formed in the second light block to reveal a surface area of the detector element, enabling the monitor beam reach the detector element;

wherein the second aperture is sized to reveal a surface area on the detector element such that the monitor beam passing through the first aperture and passing through the monitor lens and impinging on the small detector element provides information regarding the angular misalignment of the working beam.

**Claim 61 (new):** An optical switch as in Claim 60 wherein the first aperture has approximately the same cross-sectional dimensions as the monitor beam; and wherein the second

aperture has approximately the same cross-sectional dimensions as the optical mode of the monitor beam.

**Claim 62 (new):** An optical switch as in Claim 60 wherein the first aperture has approximately the same cross-sectional dimensions as the monitor beam.

**Claim 63 (new):** An optical switch as in Claim 60 wherein the second aperture has approximately the same cross-sectional dimensions as the optical mode of the monitor beam.

**Claim 64 (new):** An optical switch as in Claim 58 wherein the monitor lens is positioned with respect to the detector element such that a monitor beam passing through the monitor lens is focused on the surface of the detector element.

**Claim 65 (new):** An optical switch as in Claim 58 wherein the monitor lens is positioned with respect to the detector element such that a monitor beam passing through the monitor lens is not focused on the surface of the detector element.

**Claim 66 (new):** An optical switch comprising:

an array of optical input channels each capable of carrying an associated input light beam;

an array of output channels;

a switching array for coupling selected input channels to selected output channels enabling the switching of each input light beam to one of a plurality of output channels;

a beam splitter optically interposed between the switching array and the array of output channels to split input light beams into a monitor beam and a working beam;

an array of beam monitoring elements arranged to receive monitor beams, each beam monitoring element comprising:

a monitor lens;

a monitor fiber;

a detector element;

wherein the monitor beam passes through the monitor lens into the monitor fiber and exits the monitor fiber where the optical power of the monitor beam is measured by the detector element; and

wherein each beam monitoring element measures a monitor beam to provide optical information used for adjusting the switching array such that the working beams enter the output channels having desired optical characteristics wherein the detector elements measures optical power in a monitor beam such that both the angular misalignment and the positional misalignment of a working beam can be detected and adjusted.